

PEEP LIGHT METHOD AND APPARATUS

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Related Application

This application claims priority under 35 U.S.C. 119(e) from U.S. Provisional Application Serial No. 6/474,645 filed May 30, 2003, which application is incorporated herein by reference and made a part hereof.

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Technical Field of the Invention

This invention pertains generally to barges, and more particularly to steering a barge using a peep light.

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Background

Peep or steering lights are used to assist in the steering of a barge. The peep light is supported on the bow of the forward-most barge of a group of barges being pushed by a tug boat, typically on a pole to hold the peep light at a desired height. The tug boat captain can then use the peep light to visually gauge the position or direction of the barges as the tug boat pushes the barges.

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Brief Description of the Figures

FIG. 1A is a perspective view of an exemplary embodiment of the present invention.

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FIG. 1B is a perspective view of an exemplary embodiment of the present invention.

FIG. 2A is a view an exemplary embodiment of the present invention.

FIG. 2B is a view an exemplary embodiment of the present invention.

FIG. 2C is a view an exemplary embodiment of the present invention.

FIG. 3 is a view an exemplary embodiment of the present invention.

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FIG. 4 is a view an exemplary embodiment of the present invention.

FIG. 5 is a view an exemplary embodiment of the present invention.

FIG. 6 is a view an exemplary embodiment of the present invention.

FIG. 7A shows an example embodiment of portable shield system.

FIG. 7B shows an example embodiment of portable shield system.
FIG. 7C shows an example embodiment of portable shield system.
FIG. 7D shows an example embodiment of portable shield system.
FIG. 7E shows an example embodiment of portable shield system.

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Detailed Description of the Invention

Referring to Figures 1A and 1B there is shown a barge 100 pushed by a tug boat 102, wherein a peep light 104 (alternately referred to as a blue steering or swing light) and bow navigation light 107 (for example a 225 degree yellow flashing light) are positioned on the bow 106 of the barge 100, for example a dry cargo barge, using the peep light mounting system 200 according to one example embodiment of the invention. Barge 100 includes barge cargo covers 103, stationary barge rigging 108, barge deck fittings 110, and starboard and port 112 1/2" degree navigation lights 111a and 111b supported on a portable shield system 300.

Referring now to Figures 2-6, there is illustrated peep light support system 200 according to one example embodiment of the invention. Referring to Figures 2a, 2b and 2c there are illustrated several different side views of the system 200. The support system includes a base staff 218 mounted on a base plate 219, a telescoping upper staff 202, an adjustable barge coaming fastener 204, and adjustable peep light 206 (alternatively referred to as a steering light), watertight electrical outlets 208, watertight bow navigation light 210, lashing tie rings 212, and height adjustment set screws 214. Peep light 206 is preferably a 135 degree blue light. The bow navigation light 210 is preferably amber, for example a Perko 1111 ME amber light.

As shown in more detail in Figure 3, a steering light dimmer switch 216 is also provided in one embodiment on the base staff 218, preferably made of 2" tube aluminum construction and 8' long. Also, a commercial ring buoy holder 220 is also provided on base staff 218 above bow navigation light 210. Light 210 includes, in one example embodiment, a 2 3/4" guard post 210a, 1/2" x 10" light anchor rods 210b, a 3/8 x 8 x 10" light mounting plate 210c, a 3/8" x 4" gusset plate 210d, held in place with 3/8" weld beads, and a 120 V supply line 210e. The upper staff 202 is preferably 1 1/2" aluminum tube construction and 8' long.

As shown in Figure 4, the barge fastener 204, used to fasten the base staff 218 to the combing of a barge cargo cover (for example cover 107 shown in Figures 1A and 1B), includes a 6-8" C-clamp 217 that is itself fastened on the base staff 218 with a clamp 222, having sides 222a and 222b, that are held together with nut and bolts 223a, 223b and 223c, and can be adjusted up and down the base staff 218 to adjust its height. In this example embodiment, the barge fastener 204 includes a 3/8" x 3" fat bar 225 including several bolt holes through which the bolts pass. According to another example embodiment of the barge fastener 204 not illustrated, two C-clamps are provided, each spaced apart to provide two points of attachment to the comb of the barge cargo cover 107 (see Figures 1A and 1B).

Figure 5 illustrates in more detail the lashing tie rings 213 and set screws 214 that are used to secure the telescoping upper staff 202 in a fixed position at a desired height. Set screws 214 are threaded through 3" W x 4" L x 3/8" plates 215. According to one embodiment, the staff is sized to provide that the peep light can be positioned anywhere between 15 and 18 feet above the deck of the barge. Lashing rack arms 212 are also provided.

As illustrated in Figure 6, the peep light 206 is mounted on top of the upper staff 202, with an electrical conduit running down the center of the staffs 202 and 218 to the source of electrical power through a wall of the base staff 218. Flag mounting rings 224 are also provided for flying a flag on the upper staff 202.

In use, the system 200 can be clamped to a barge using barge fastener 204, and in addition lashed to the barge using rope or other line, using the lashing tie rings 212. Power is supplied to the peep light from an on-board power conduit and through the support system 200 electrical system.

Thus, according to at least one embodiment of the invention, the peep light support system includes the following features:

- aluminum construction
- telescoping upper staff allowing adjustable peep light height
- easy mounting using C-clamp and lashing system
- watertight electrical system
- light weight construction

- sturdy construction

Referring to Figures 7A, 7B, 7C, 7D and 7E there is illustrated an example embodiment of portable shield system 300. The port shield system 302 shown in Figure 7A includes a port navigation light (red) 304, for example found in the Perko catalog as part number 1372. Shield system 302 includes an aluminum base 306 and aluminum back and side walls 308 and 310, all preferably $\frac{1}{4}$ " in thickness. C-clamps 307a and 307b (not shown in full but illustrated in Figure 7D with respect to system 320).

Shown in Figures 7B (end view), 7C (top view) and 7D (side view), there is illustrated starboard portable shield system 320. System 320 is constructed in the same manner as system 302 except for being reversed in orientation to accommodate the port as opposed to the starboard side of the barge. The port shield system 302 shown in Figure 7A includes a port navigation light 304, for example found in the Perko catalog as part number 1372. Shield system 320 includes an aluminum base 324 and aluminum back and side walls 326 and 328. The port shield system 320 includes a starboard navigation light (green) 322, for example found in the Perko catalog as part number 1372. Six inch C-clamps 330a and 330b (Figure 7E illustrates a C-clamp in more detail) are fastened to the bottom of base 324, for example by welding, and are positioned to enable the shield system to be clamped to the comb of a barge cover, for example a cover 107 (see Figures 1A and 1B).